

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PCT-166	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/JP 03/ 06682	International filing date (day/month/year) 28/05/2003	(Earliest) Priority Date (day/month/year) 20/06/2002
Applicant NISSAN MOTOR CO., LTD		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1
☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP/06682

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01B3/32 C01B3/38 C01B3/36 C01B3/48 C01B3/50
H01M8/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01B H01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 09, 4 September 2002 (2002-09-04) -& JP 2002 147716 A (NISSAN MOTOR CO LTD), 22 May 2002 (2002-05-22) abstract figures 1,2 --- -/--	1,8,9

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

8 October 2003

Date of mailing of the international search report

21/10/2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/J /06682

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 09, 4 September 2002 (2002-09-04) & JP 2002 154805 A (NISSAN MOTOR CO LTD), 28 May 2002 (2002-05-28) abstract -& DATABASE WPI Week 200260 Derwent Publications Ltd., London, GB; AN 2002-561488 XP002256871 & JP 2002 154805 A (NISSAN MOTOR CO LTD), 28 May 2002 (2002-05-28) abstract ---	1-5
X	US 3 982 910 A (HOUSEMAN JOHN ET AL) 28 September 1976 (1976-09-28) column 3, line 58 - line 46 column 7, line 18 - line 46 figure 10 ---	1
A	EP 1 198 020 A (NISSAN MOTOR) 17 April 2002 (2002-04-17) paragraph '0018! - paragraph '0022! paragraph '0026! - paragraph '0029! figure 1 -----	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JL/06682

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 2002147716	A	22-05-2002	NONE	
JP 2002154805	A	28-05-2002	NONE	
US 3982910	A	28-09-1976	AU 500121 B2	10-05-1979
			AU 8282175 A	13-01-1977
			CA 1070501 A1	29-01-1980
			DE 2530653 A1	29-01-1976
			FR 2277764 A1	06-02-1976
			GB 1489704 A	26-10-1977
			IT 1039754 B	10-12-1979
			JP 981272 C	27-12-1979
			JP 51031695 A	17-03-1976
			JP 54013230 B	29-05-1979
			SE 7507759 A	12-01-1976
EP 1198020	A	17-04-2002	JP 2002124286 A	26-04-2002
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			US 2002045078 A1	18-04-2002